

SUPPLEMENTAL ADVISORY ACTION

1. This communication is in response Amendment After-Final filed 08/06/09 and Petition under 37 CFR §1.181 filed 09/02/09 (hereafter referred to as the “Petition”).
2. Claims 1-35, 37-46 as filed 03/26/09 remain pending in instant application, wherein claims 37-46 are withdrawn from consideration, claims 1-35 stand rejected and claim 36 was canceled.
3. Objective of this supplemental advisory action is to supplement/clarify issues raised both in the advisory action and the Petition above mentioned.
4. SHORTENED STATUTORY PERIOD FOR REPLY STANDS SET according to the guidelines provided in Final Rejection mailed 07/20/09 and/or Advisory Action mailed 08/21/09.
5. Supplemental response includes:

(A) Effective Priority Date of Leonard

Showing as to whether the provisional 60/469,558 can be relied upon to teach the claimed limitation, “at least one designated Virtual Private Server (VPS) with a set of services that perform administrative operations, wherein the designated VPS provides administrative services to each of the server processes...”

Regarding Claim 1, **Provisional 60/469558** (‘558 here after) teaches a system for managing administration of computer services provided to users comprising:

- a computer system (Fig. 1.1);
- an operating system running on the computer system (p. 1, virtualizing operating system services allowing one or more process to run in isolation);
- a plurality of server processes running on the computer system, wherein the processes provide services (e.g. Apache, Oracle, OpenSSH, etc. on Fig. 1.1) to a plurality of remote users (Fig. 1.1 on p. 3 and subdivided system services among customers see p. 2); and
- at least one designated Virtual Private Server VPS (Zones on Fig. 1.1 on p. 3) with a set of services that perform administrative operations (Virtualization...any actions taken by administrator on p. 2), wherein the designated VPS provides administrative services to each of the server processes and wherein the designated VPS is isolated by a logical isolation of processes (process isolation page 2, section 1.1, also section 1.2 (1.) Isolation on p. 4).

(B) Propriety of Final Rejections under U.S.C. §102(a) based on Leonard et. al. (US 7,188,120)

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Showing where the references teaches the claimed limitation, “at least one designated Virtual Private Server (VPS) with a set of services that perform administrative operations, wherein the designated VPS provides administrative services to each of the server processes...”

Regarding claim 1, **LEONARD** teaches a system for managing administration of computer services provided to users comprising:

- a computer system (400 of Fig. 4);
 - an operating system (OS) running on the computer system (col 3/lines 6-20);
 - a plurality of server processes (170) running on the computer system, wherein the processes provide services to a plurality of remote users (col 3/lines 21-35, e.g. host applications such as websites i.e. services col 3/lines 36-col 4/line 6); and
 - at least one designated Virtual Private Server VPS (VOSE) with a set of services that perform administrative operations (col 3/lines 20-35),
- wherein the designated VPS provides administrative services to each of the server processes (col 4/lines 6-30, i.e. any number of administrative tasks) and wherein the designated VPS is isolated by a logical isolation of processes (col 3/lines 39-col 4/line 4 , i.e. isolated such that each process behave like virtual standalone computer).

(C) Propriety of Final Rejections under U.S.C. §102(a) based on TechOne Hosting

Showing where the references teaches the claimed limitation, “at least one designated Virtual Private Server (VPS) with a set of services that perform administrative operations, wherein the designated VPS provides administrative services to each of the server processes...”

(This document contains a total of 30 pages, namely, 1-13, 1-4 and 1-12 and hereafter will be referred to accordingly)

Referring to claim 1, TechOne-Hosting discloses a hosting platform with Virtual Private Server (VPS) technology system (p. 2 of 13) for managing administration of computer services provided to users (Managed services & Admin Tools p. 2 of 4, administration functions to services provided, p. 1 of 4) comprising:

- a computer system (physical server, p. 4 of 13);
- an operating system running on the computer system (selectable platform p. 7 of 13);
- a plurality of server processes running on the computer system (processes resources p. 7 of 13, server running dedicated application services p. 4 of 13), wherein the processes provide services to a plurality of remote users (e.g. Web services, Mail, FTP, etc. p. 5-6 of 13); and
- a designated Virtual Private Server VPS (dedicated server with VPS technology, p. 1 of 13) with a set of services that perform administrative services (administration tools, web developer tools/suite p. 12 of 13, advanced resource management services p. 4 of 13, iManager control panel p. 5 of 12, administration services p. 1 of 4, log analyzer tools p. 9 of 13), wherein the designated VPS provides administrative services to each of the server processes (e.g.,

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services, i.e. software is not shared for each VPS, independent and dedicated set of applications services p. 4 of 13) and

wherein the designated VPS is isolated by a logical isolation of processes (unmatched isolation, each VPS operating in its own space, independently, in private and protected area, p. 3-4 of 13).

(E) Effective Priority Date of Leonard

A showing of where each cited portion of the Leonard reference (US 7,188,120) subject matter finds support under 35 USC 112, first paragraph, in the written description of the specification in the provisional application **60/469,558** to which priority is claimed.

Provisional 60/469,558	US 7188120 (Portions relied upon)
<p>Chapter 2: First paragraph, page 7 through third paragraph, page 8. Details of Operating system, Unix System, Solaris Operating system, FTP Servers, Device nodes, Trusted Solaris Operating Environment, virtual machines.</p> <p>Chapter 1: Figure 1.1 page 3, Details of storage complex, remote admin/monitoring, CPU, disk space. First paragraph, page 1, Details of virtual web hosting, Unix Server, Solaris System, Traditional server components.</p> <p>Chapter 10, First paragraph , page 63, Details of Solaris, CPU, physical memory, processes, virtual machine.</p> <p>Chapter 11: Second last paragraph, page 68, Details of IPC, persistent objects, shared memory, message queues, processes, kernel.</p> <p>Chapter 3: Sixth Paragraph, page 11, Details of global zone and non-global zone.</p> <p>Chapter 3: First paragraph, page 9 through Fourth paragraph, page 12. Details of global zone, global administrator.</p> <p>Chapter 3: First paragraph, page 13, Details of Zone Administration.</p> <p>Chapter 3: Figure 3.1, Details of Zone states.</p> <p>Chapter 5, Third paragraph, Details of privilege framework</p>	<p><u>Column 3</u></p> <p>(10) FIG. 1 illustrates a functional block diagram of an OSE 100 in accordance with one embodiment of the present invention. OSE 100 may be derived by executing an operating system (OS) in a general-purpose computer system, such as computer system 400 illustrated in FIG. 4, for example. Although FIG. 4 depicts a system that contains centralized component resources, embodiments may be implemented on systems that comprise remotely distributed component resources (e.g., processors, memory, persistent storage, etc.) that access each other via a network. For illustrative purposes, the OS is assumed to be Solaris. TM. manufactured by Sun Microsystems, Inc. of Santa Clara, Calif. However, the concepts taught herein may be applied to any OS, including but not limited to Unix, Linux, Microsoft Windows, MacOS, etc.</p> <p>(11) As shown in FIG. 1, OSE 100 may comprise one or more zones (also referred to herein as partitions), including a global zone 130 and zero or more non-global zones 140. The global zone 130 is the general OSE that is created when the OS is booted and executed, and serves as the default zone in which processes may be executed if no non-global zones 140 are created. In the global zone 130, administrators and/or processes having the proper rights and privileges can perform generally any task and access any device/resource that is available on the computer system on which the OS is run. Thus, in the global zone 130, an administrator</p>

Chapter 1: First paragraph, page 2, Details of Virtualization and zones providing a virtualized environment.

Chapter 12: First paragraph, page 71, Details of Solaris packaging system.

Chapter 9: Last paragraph, page 52, Details of Fully Virtual Devices.

Chapter 9: First paragraph, page 53, Details of Sharable Virtual Devices.

Chapter 9: First paragraph, page 54, Details of Namespace, Solaris virtual operating system environment.

Chapter 8: Last two paragraphs, page 44, Details of network interfaces with global zone and non-global zone, logical interfaces, zone administrators.

Chapter 1: Last paragraph, page 1, Details of Isolation.

Chapter 1: Figure 1.1, page 3, Details of different websites, blueslugs.com, foo.net, beck.org, web services, isolated network services, core processes.

can administer the entire computer system. In one embodiment, it is in the global zone 130 that an administrator executes processes to configure and to manage the non-global zones 140.

(12) The non-global zones 140 represent separate and distinct partitions of the OSE 100. Each of non-global zones 140 may be viewed as a virtual operating system environment ("VOSE"). One of the purposes of the non-global zones 140 is to provide isolation. In one embodiment, a non-global zone 140 can be used to isolate a number of entities, including but not limited to processes 170, one or more file systems 180, and one or more logical network interfaces 182. Because of this isolation, processes 170 executing in one non-global zone 140 cannot access or affect processes in any other zone. Similarly, processes 170 in a non-global zone 140 cannot access or affect the file system 180 of another zone, nor can they access or affect the network interface 182 of another zone. As a result, the processes 170 in a non-global zone 140 are limited to accessing and affecting the processes and entities in that zone. Isolated in this manner, each non-global zone 140 behaves like a virtual standalone computer. While processes 170 in different non-global zones 140 cannot access or affect each other, it should be noted that they may be able to communicate with each other via a network connection through their respective logical network interfaces 182. This is similar to how processes on separate standalone computers communicate with each other.

(13) Having non-global zones 140 that are isolated from each other may be desirable in many applications. For example, if a single computer system running a single instance of an OS is to be used to host applications for different competitors (e.g., competing websites), then it would be desirable to isolate the data and

Chapter 1: Third paragraph, page 1, Details of Security, Isolation, network services, prevent security violation.	processes of one competitor from the data and processes of another competitor. That way, it can be ensured that information will not be leaked between the competitors.
<p>Chapter 8: First paragraph, page 44, Details of partitioning of global and non-global zones.</p> <p>Chapter 1: Figure 1.1, page 3, Details of different websites, blueslugs.com, foo.net, beck.org, web services, isolated network services, core processes.</p> <p>Chapter 3: Sixth Paragraph, page 11, Details of non-global zone administration.</p> <p>Chapter 3: First paragraph, page 9 through Fourth paragraph, page 12. Details of global zone, global administration to perform administrator task.</p> <p>Chapter 3: First paragraph, page 13, Details of Zone Administration.</p> <p>Chapter 3: First paragraph, page 18, Details of Zone System controller, high level of privilege, global and non-global zone command processes.</p> <p>Chapter 5, Second paragraph, page 28, Details of Zone Privilege Limits.</p> <p>Chapter 3, Second paragraph, page 19, Monitoring and Controlling Zone processes, global zone administrator, control processes, access, control, allocate resources.</p> <p>Chapter 4, First paragraph, page 23, Details of zone commands, establish operational</p>	<p><u>Column 4</u></p> <p>Partitioning an OSE 100 into non-global zones 140 is one possible way of achieving this isolation. Competing applications (e.g., websites) may then be hosted in separate non-global zones 140.</p> <p>(14) In one embodiment, each non-global zone 140 may be administered separately. More specifically, it is possible to assign a zone administrator to a particular non-global zone 140 and grant that zone administrator rights and privileges to manage various aspects of that non-global zone 140. With such rights and privileges, the zone administrator can perform any number of administrative tasks that affect the processes and other entities within that non-global zone 140. However, the zone administrator cannot change or affect anything in any other non-global zone 140 or the global zone 130. Thus, in the above example, each competitor can administer his/her zone, and hence, his/her own set of applications, but cannot change or affect the applications of a competitor. In one embodiment, to prevent a non-global zone 140 from affecting other zones, the entities in a non-global zone 140 generally are not allowed to access or control any of the physical devices of the computer system.</p> <p>(15) In contrast to a non-global zone administrator, a global zone administrator with proper rights and privileges may administer all aspects of the OSE 100 and the computer system as a whole. Thus, a global zone administrator may, for example, access and control physical devices, allocate and control system resources,</p>

<p>parameters.</p> <p>Chapter 11, Last two paragraphs, page 69, Details of Event Channels, IPC, Kernel memory.</p> <p>Chapter 11, Third paragraph, page 69, Details of IPC interfaces, network interfaces, non-global zones and global zones, IPC, Kernel memory.</p> <p>Chapter 7, First paragraph, page 37, Details of File Systems, Virtualization of storage in a zone, global administrator for mapping files systems.</p> <p>Chapter 3: Figure 3.1, Details of Zone state model.</p> <p>Chapter 3: Last paragraph, page 9, Details of non-global states, configured, installed, ready, running.</p> <p>Chapter 3, Second paragraph, page 11, Details of zonecfg to specify all the configuration parameters.</p> <p>Chapter 3, page 11, Details of resources types having properties, zone name, zone ID, root path, file system, network interface, devices.</p> <p>Chapter 3, First paragraph, page 12, Details of resource controls for different states for the zone created and resource pool assignments.</p>	<p>establish operational parameters, etc. A global zone administrator may also access and control processes and entities within a non-global zone 140.</p> <p>(16) In one embodiment, kernel 150 enforces the zone boundaries. More specifically, kernel 150 ensures that processes 170 in one non-global zone 140 are not able to access or affect processes 170, file systems 180, and network interfaces 182 of another zone (non-global or global). In addition to enforcing the zone boundaries, kernel 150 also provides a number of other services. These services include but are not limited to mapping the network interfaces 182 of the non-global zones 140 to the physical network devices 120 of the computer system, and mapping the file systems 180 of the non-global zones 140 to an overall file system and a physical storage 110 of the computer system.</p> <p>(17) Non-Global Zone States</p> <p>(18) In one embodiment, a non-global zone 140 may take on one of four states: (1) Configured; (2) Installed; (3) Ready; and (4) Running. When a non-global zone 140 is in the Configured state, it means that an administrator in the global zone 130 has invoked an operating system utility (in one embodiment, zonecfg(1m)) to specify all of the configuration parameters of a non-global zone 140, and has saved that configuration in persistent physical storage 110. In configuring a non-global zone 140, an administrator may specify a number of different parameters. These parameters may include, but are not limited to, a zone name, a zone path to the root directory of the zone's file system 180, specification of one or more file systems to be mounted when the zone is created, specification of zero or more network interfaces, specification of devices to be configured when the zone is created, and zero or more resource pool associations.</p>
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<p>Chapter 3: First paragraph, page 13, Details of Zone Administration.</p> <p>Chapter 3: Second paragraph, page 13, Details of listing zones for directories including root directory and sub directories.</p> <p>Chapter 3: Third paragraphs, page 13, Details of Installing zones for the file system, files, directories.</p>	<p>(19) Once a zone is in the Configured state, a global administrator may invoke another operating system utility (in one embodiment, zoneadm(1m)) to put the zone into the Installed state. When invoked, the operating system utility interacts with the kernel 150 to install all of the necessary files and directories into the zone's root directory, or a subdirectory thereof.</p>
<p>Chapter 3: First paragraph, page 13, Details of Zone Administration for non-global zone and global zone.</p> <p>Chapter 3: Third paragraph, page 13, Details of booting zones, zoneadmd, running, configured, verify, install.</p> <p>Chapter 3: Third paragraph, page 13, Details of Installing zones for the file system, files, directories. Details of halting zones, zone ID, ZONENAME.</p> <p>Chapter 3, Second paragraph, page 13, Details of zonename.</p> <p>Chapter 6, figure 6.1, page 36, Details of zonename, kernel resource, kernel processes, viewed from the global zone and a non-global zone.</p> <p>Chapter 9, Last paragraph, page 55, Details of Ready state of non-global zone.</p> <p>Chapter 4, Firth paragraph, page 22, Details of System Log Daemon, kernel, virtual platform for non-global zone and global zone.</p> <p>Chapter 13, Second paragraph, page 77, Details of kernel modules for global zone and non-global zone</p>	<p><u>Column 5</u></p> <p>(20) To put an Installed zone into the Ready state, a global administrator invokes an operating system utility (in one embodiment, zoneadm(1m) again), which a zoneadmd process 162 causes to be started (there is a zoneadmd process associated with each non-global zone). In one embodiment, zoneadmd 162 runs within the global zone 130 and is responsible for managing its associated non-global zone 140. After zoneadmd 162 is started, it interacts with the kernel 150 to establish the non-global zone 140. In creating a non-global zone 140, a number of operations are performed, including but not limited to assigning a zone ID, starting a zsched process 164 (zsched is a kernel process; however, it runs within the non-global zone 140, and is used to track kernel resources associated with the non-global zone 140), mounting file systems 180, plumbing network interfaces 182, configuring devices, and setting resource controls. These and other operations put the non-global zone 140 into the Ready state to prepare it for normal operation.</p> <p>(21) Putting a non-global zone 140 into the Ready state gives rise to a virtual platform on which one or more processes may be executed. This virtual platform provides the infrastructure necessary for enabling one or more processes to be executed within the non-global zone 140 in isolation from processes in other non-global zones 140. The virtual platform also makes it</p>

<p>Chapter 9, Last paragraph, page 55, Details of Device Management, Zone Runtime, Ready state, Running state</p> <p>Chapter 7, First paragraph, page 41, Details of Zone shutdown.</p> <p>Chapter 7, Second paragraph, page 41, Details of Autoofs for virtual standalone computer.</p> <p>Chapter 9, Second paragraph, page 51, Details of virtualization and virtual platform provided by non-global zone independent of any processes.</p> <p>Chapter 3: Figure 3.1, Details of Zone state model containing non-global zone in a ready state and then in running state.</p> <p>Chapter 3: Third paragraph, page 13, Details of zoneadmd to start initialization process.</p> <p>Chapter 3: Third paragraph, page 13, Details of Installing zones for the file systems, network interfaces, application environment with user processes in the virtual platform.</p> <p>Chapter 9, Last paragraph, page 55, Details of processes executing within non-global zone.</p> <p>Chapter 3: Figure 3.1, Details of Zone state model containing non-global zone in running</p>	<p>possible to isolate other entities such as file system 180 and network interfaces 182 within the non-global zone 140, so that the zone behaves like a virtual standalone computer. When a non-global zone 140 is in the Ready state, no user or non-kernel processes are executing inside the zone (as is mentioned above, zsched is a kernel process, not a user process). Thus, the virtual platform provided by the non-global zone 140 is independent of any processes executing within the zone. Put another way, the zone and hence, the virtual platform, exists even if no user or non-kernel processes are executing within the zone. This means that a non-global zone 140 can remain in existence from the time it is created until either the zone or the OS is terminated. The life of a non-global zone 140 need not be limited to the duration of any user or non-kernel process executing within the zone.</p> <p>(22) After a non-global zone 140 is in the Ready state, it can be transitioned into the Running state by executing one or more user processes in the zone. In one embodiment, this is done by having zoneadmd 162 start an init process 172 in its associated zone. Once started, the init process 172 looks in the file system 180 of the non-global zone 140 to determine what applications to run. The init process 172 then executes those applications to give rise to one or more other processes 174. In this manner, an application environment is initiated on the virtual platform of the non-global zone 140. In this application environment, all processes 170 are confined to the non-global zone 140; thus, they cannot access or affect processes, file systems, or network interfaces in other zones. The application environment exists so long as one or more user processes are executing within the non-global zone 140.</p> <p>(23) After a non-global zone 140 is in the Running state, its associated zoneadmd 162 can</p>
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<p>state.</p> <p>Chapter 3: Third paragraph, page 13, Details of zoneadmd to initiate and control number of zone administrative tasks.</p> <p>Chapter 3: Third paragraph, page 13, Details of booting zones, halting rebooting, running, configured, verify, restart, install non-global zone..</p> <p>Chapter 3: Third paragraph, page 13, Details of Installing zones for the file systems, network interfaces, application environment with user processes in the virtual platform.</p>	<p>be used to manage it. Zoneadmd 162 can be used to initiate and control a number of zone administrative tasks. These tasks may include, for example, halting and rebooting the non-global zone 140. When a non-global zone 140 is halted, it is brought from the Running state down to the Installed state. In effect, both the application environment and the virtual platform are terminated. When a non-global zone 140 is rebooted, it is brought from the Running state down to the Installed state, and then transitioned from the Installed state through the Ready state to the Running state. In effect, both the application environment and the virtual platform are terminated and restarted.</p>
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haresh Patel whose telephone number is (571) 272-3973. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 10:00 am to 8:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn, can be reached at (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/HARESH N PATEL/